PROGRAMMABLE VERTICAL FILTER FOR VIDEO ENCODING

Abstract of the Disclosure

A technique is provided for programmably vertically
filtering pixel values of frames of a sequence of video
frames. The technique includes separating luminance
components and chrominance components of the pixel values
within a vertical filter buffer, then vertically filtering
luminance components of the pixel values using programmable
luminance filter coefficients, and vertically filtering
chrominance components of the pixel values using
programmable chrominance filter coefficients. The filtered
luminance component data and filtered chrominance component
data is subsequently merged onto a single
luminance/chrominance bus for further filtering and/or
encoding. The luminance and chrominance filter coefficients
are programmable and may be changed dynamically and
repeatedly at picture boundaries. In one embodiment, the
programmable vertical filter includes a four tap luminance
component filter and a five tap chrominance component
filter.